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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/088,724

DATE: 07/15/2002

TIME: 12:30:05

Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF3\07152002\J088724.raw

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3 <110> APPLICANT: Keio University
5 <120> TITLE OF INVENTION: Humanin, a novel polypeptide that protects neuronal
6   death
8 <130> FILE REFERENCE: KUV-102DP1PCT1
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/088,724
C--> 11 <141> CURRENT FILING DATE: 2002-06-10
13 <150> PRIOR APPLICATION NUMBER: JP 1999-264679
14 <151> PRIOR FILING DATE: 1999-09-17
15 <150> PRIOR APPLICATION NUMBER: JP 2000-201456
16 <151> PRIOR FILING DATE: 2000-06-29
18 <160> NUMBER OF SEQ ID NOS: 60
20 <170> SOFTWARE: PatentIn Ver. 2.0
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 85
24 <212> TYPE: DNA
25 <213> ORGANISM: Artificial Sequence
27 <220> FEATURE:
28 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
29   synthesized sequence
31 <400> SEQUENCE: 1
32 aattcaccat ggctccacga gggttcagct gtctcttact tttaaccagt gaaattgacc 60
33 tgcccgtgaa gaggcgggca ggtac                                     85
35 <210> SEQ ID NO: 2
36 <211> LENGTH: 77
37 <212> TYPE: DNA
38 <213> ORGANISM: Artificial Sequence
40 <220> FEATURE:
41 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
42   synthesized sequence
44 <400> SEQUENCE: 2
45 ctgcccgcct cttcacgggc aggtcaattt cactgggttaa aagtaagaga cagctgaacc 60
46 ctcgtggagc catggtg                                             77
48 <210> SEQ ID NO: 3
49 <211> LENGTH: 79
50 <212> TYPE: DNA
51 <213> ORGANISM: Artificial Sequence
53 <220> FEATURE:
54 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
55   synthesized sequence
57 <400> SEQUENCE: 3
58 ctgcccgcct cttcacgggc aggtcaattt cactgggttaa aagtaagaga cagctgaacc 60
59 ctcgtggagc catgtggtg                                             79
61 <210> SEQ ID NO: 4

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62 <211> LENGTH: 75
63 <212> TYPE: DNA
64 <213> ORGANISM: Homo sapiens
66 <220> FEATURE:
67 <221> NAME/KEY: CDS
68 <222> LOCATION: (1)..(72)
70 <400> SEQUENCE: 4
71 atg gct cca cga ggg ttc agc tgt ctc tta ctt tta acc agt gaa att   48
72 Met Ala Pro Arg Gly Phe Ser Cys Leu Leu Leu Leu Thr Ser Glu Ile
73   1           5           10           15
75 gac ctg ccc gtg aag agg cgg gca tga   75
76 Asp Leu Pro Val Lys Arg Arg Ala
77           20
79 <210> SEQ ID NO: 5
80 <211> LENGTH: 24
81 <212> TYPE: PRT
82 <213> ORGANISM: Homo sapiens
84 <400> SEQUENCE: 5
85 Met Ala Pro Arg Gly Phe Ser Cys Leu Leu Leu Leu Thr Ser Glu Ile
86   1           5           10           15
88 Asp Leu Pro Val Lys Arg Arg Ala
89           20
91 <210> SEQ ID NO: 6
92 <211> LENGTH: 34
93 <212> TYPE: PRT
94 <213> ORGANISM: Artificial Sequence
96 <220> FEATURE:
97 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
98   synthesized sequence (sHN-FLAG)
100 <400> SEQUENCE: 6
101 Met Ala Pro Arg Gly Phe Ser Cys Leu Leu Leu Leu Thr Ser Glu Ile
102   1           5           10           15
104 Asp Leu Pro Val Lys Arg Arg Ala Gly Thr Asp Tyr Lys Asp Asp Asp
105           20           25           30
107 Asp Lys
110 <210> SEQ ID NO: 7
111 <211> LENGTH: 24
112 <212> TYPE: PRT
113 <213> ORGANISM: Artificial Sequence
115 <220> FEATURE:
116 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
117   synthesized sequence (HNR)
119 <400> SEQUENCE: 7
120 Met Ala Pro Arg Gly Phe Ser Cys Arg Leu Leu Leu Thr Ser Glu Ile
121   1           5           10           15
123 Asp Leu Pro Val Lys Arg Arg Ala
124           20
126 <210> SEQ ID NO: 8
127 <211> LENGTH: 24

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128 <212> TYPE: PRT
129 <213> ORGANISM: Artificial Sequence
131 <220> FEATURE:
132 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
133     synthesized sequence (HNG)
135 <400> SEQUENCE: 8
136 Met Ala Pro Arg Gly Phe Ser Cys Leu Leu Leu Leu Thr Gly Glu Ile
137   1           5           10           15
139 Asp Leu Pro Val Lys Arg Arg Ala
140           20
142 <210> SEQ ID NO: 9
143 <211> LENGTH: 24
144 <212> TYPE: PRT
145 <213> ORGANISM: Artificial Sequence
147 <220> FEATURE:
148 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
149     synthesized sequence (HNA)
151 <400> SEQUENCE: 9
152 Met Ala Pro Arg Gly Phe Ser Ala Leu Leu Leu Leu Thr Ser Glu Ile
153   1           5           10           15
155 Asp Leu Pro Val Lys Arg Arg Ala
156           20
158 <210> SEQ ID NO: 10
159 <211> LENGTH: 24
160 <212> TYPE: PRT
161 <213> ORGANISM: Artificial Sequence
163 <220> FEATURE:
164 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
165     synthesized sequence
167 <400> SEQUENCE: 10
168 Met Ala Pro Arg Gly Phe Ser Cys Leu Leu Leu Leu Thr Ser Glu Ile
169   1           5           10           15
171 Asp Leu Pro Val Ala Ala Ala Ala
172           20
174 <210> SEQ ID NO: 11
175 <211> LENGTH: 19
176 <212> TYPE: DNA
177 <213> ORGANISM: Artificial Sequence
179 <220> FEATURE:
180 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
181     synthesized sequence
183 <400> SEQUENCE: 11
184 ggggtgttgag cttgaacgc                               19
186 <210> SEQ ID NO: 12
187 <211> LENGTH: 23
188 <212> TYPE: PRT
189 <213> ORGANISM: Artificial Sequence
191 <220> FEATURE:
192 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially

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193      synthesized sequence (deltaN1-Humanin)
195 <400> SEQUENCE: 12
196 Ala Pro Arg Gly Phe Ser Cys Leu Leu Leu Leu Thr Ser Glu Ile Asp
197   1           5           10           15
199 Leu Pro Val Lys Arg Arg Ala
200           20
202 <210> SEQ ID NO: 13
203 <211> LENGTH: 22
204 <212> TYPE: PRT
205 <213> ORGANISM: Artificial Sequence
207 <220> FEATURE:
208 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
209      synthesized sequence (deltaN2-Humanin)
211 <400> SEQUENCE: 13
212 Pro Arg Gly Phe Ser Cys Leu Leu Leu Leu Thr Ser Glu Ile Asp Leu
213   1           5           10           15
215 Pro Val Lys Arg Arg Ala
216           20
218 <210> SEQ ID NO: 14
219 <211> LENGTH: 21
220 <212> TYPE: PRT
221 <213> ORGANISM: Artificial Sequence
223 <220> FEATURE:
224 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
225      synthesized sequence (deltaN3-Humanin)
227 <400> SEQUENCE: 14
228 Arg Gly Phe Ser Cys Leu Leu Leu Leu Thr Ser Glu Ile Asp Leu Pro
229   1           5           10           15
231 Val Lys Arg Arg Ala
232           20
234 <210> SEQ ID NO: 15
235 <211> LENGTH: 20
236 <212> TYPE: PRT
237 <213> ORGANISM: Artificial Sequence
239 <220> FEATURE:
240 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
241      synthesized sequence (deltaN4-Humanin)
243 <400> SEQUENCE: 15
244 Gly Phe Ser Cys Leu Leu Leu Leu Thr Ser Glu Ile Asp Leu Pro Val
245   1           5           10           15
247 Lys Arg Arg Ala
248           20
250 <210> SEQ ID NO: 16
251 <211> LENGTH: 19
252 <212> TYPE: PRT
253 <213> ORGANISM: Artificial Sequence
255 <220> FEATURE:
256 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
257      synthesized sequence (deltaN5-Humanin)

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259 <400> SEQUENCE: 16
260 Phe Ser Cys Leu Leu Leu Leu Thr Ser Glu Ile Asp Leu Pro Val Lys
261   1           5           10           15
263 Arg Arg Ala
266 <210> SEQ ID NO: 17
267 <211> LENGTH: 18
268 <212> TYPE: PRT
269 <213> ORGANISM: Artificial Sequence
271 <220> FEATURE:
272 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
273     synthesized sequence (deltaN6-Humanin)
275 <400> SEQUENCE: 17
276 Ser Cys Leu Leu Leu Leu Thr Ser Glu Ile Asp Leu Pro Val Lys Arg
277   1           5           10           15
279 Arg Ala
282 <210> SEQ ID NO: 18
283 <211> LENGTH: 17
284 <212> TYPE: PRT
285 <213> ORGANISM: Artificial Sequence
287 <220> FEATURE:
288 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
289     synthesized sequence (deltaN7-Humanin)
291 <400> SEQUENCE: 18
292 Cys Leu Leu Leu Leu Thr Ser Glu Ile Asp Leu Pro Val Lys Arg Arg
293   1           5           10           15
295 Ala
298 <210> SEQ ID NO: 19
299 <211> LENGTH: 16
300 <212> TYPE: PRT
301 <213> ORGANISM: Artificial Sequence
303 <220> FEATURE:
304 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
305     synthesized sequence (deltaN8-Humanin)
307 <400> SEQUENCE: 19
308 Leu Leu Leu Leu Thr Ser Glu Ile Asp Leu Pro Val Lys Arg Arg Ala
309   1           5           10           15
311 <210> SEQ ID NO: 20
312 <211> LENGTH: 16
313 <212> TYPE: PRT
314 <213> ORGANISM: Artificial Sequence
316 <220> FEATURE:
317 <223> OTHER INFORMATION: Description of Artificial Sequence: artificially
318     synthesized sequence (deltaN2 deltaC6-Humanin)
320 <400> SEQUENCE: 20
321 Pro Arg Gly Phe Ser Cys Leu Leu Leu Leu Thr Ser Glu Ile Asp Leu
322   1           5           10           15
324 <210> SEQ ID NO: 21
325 <211> LENGTH: 17
326 <212> TYPE: PRT

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## VERIFICATION SUMMARY

DATE: 07/15/2002

PATENT APPLICATION: US/10/088,724

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Input Set : A:\Sequence Listing.txt

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L:10 M:270 C: Current Application Number differs, Replaced Application Number

L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date